

WHAT IS CLAIMED IS:

1. An active matrix substrate including a plurality of semiconductor elements formed on a board, a semiconductor element portion of the active matrix substrate, in which the plurality of semiconductor elements are formed, comprising:

a storage capacitor formed on the board;

a first insulating layer formed on the storage capacitor;

a semiconductor layer formed above the storage capacitor via the first insulating layer;

a gate insulating layer formed on the semiconductor layer;

a gate electrode layer including a gate electrode formed above the semiconductor layer via the gate insulating layer;

a second insulating layer covering the gate electrode layer and the semiconductor layer;

a first light-shielding layer formed above the semiconductor layer via the second insulating layer to cover at least a channel region of the semiconductor layer;

a third insulating layer formed on the first light-

shielding layer;

a source electrode layer including a source electrode and a drain electrode formed on the third insulating layer;

a fourth insulating layer formed on the source electrode layer; and

a pixel electrode formed on the fourth insulating layer and electrically connected to the drain electrode,

wherein the first light-shielding layer is conductive and has a drain-side light-shielding portion electrically connected to one of a pair of electrodes of the storage capacitor and also electrically connected to the drain electrode.

2. The active matrix substrate of claim 1, wherein the first light-shielding layer further has a source-side light-shielding portion electrically connected to the source electrode.

3. The active matrix substrate of claim 1, wherein the first light-shielding layer further has a middle light-shielding portion having no electrical connection with the source electrode or the drain electrode, and the

middle light-shielding portion is placed above the channel region.

4. The active matrix substrate of claim 3, wherein the middle light-shielding portion is held at a constant voltage.

5. The active matrix substrate of claim 1, wherein the first light-shielding layer further has a source-side light-shielding portion connected to the source electrode,

the first and second insulating layers have a contact hole for connecting the first light-shielding layer and the one of the electrodes of the storage capacitor, and the second insulating layer further has a first contact hole for connecting the drain-side light-shielding portion and the drain region of the semiconductor layer and a second contact hole for connecting the source-side light-shielding portion and the source region of the semiconductor layer,

the third insulating layer has a third contact hole for connecting the drain electrode and the drain-side light-shielding portion and a fourth contact hole for connecting the source electrode and the source-side light-

shielding portion, and

the first contact hole and the third contact hole are placed to be in line with each other, and the second contact hole and the fourth contact hole are placed to be in line with each other.

6. The active matrix substrate of claim 1, wherein the semiconductor layer has LDD regions on both sides of the channel region, and the first light-shielding layer is placed above at least the channel region and the LDD regions.

7. The active matrix substrate of claim 6, wherein the first light-shielding layer further has a middle light-shielding portion having no electrical connection with the source electrode or the drain electrode, and the middle light-shielding portion is placed above the channel region and the LDD regions.

8. The active matrix substrate of claim 7, wherein the middle light-shielding portion is held at a constant potential.

9. The active matrix substrate of claim 1, further

comprising between the source electrode layer and the fourth insulating layer:

- a fifth insulating layer covering the source electrode layer; and

- a second light-shielding layer formed above at least a gap between the source electrode and the drain electrode via the fifth insulating layer.

10. A display device having an active matrix substrate and a display medium layer,

wherein the active matrix substrate includes a plurality of semiconductor elements formed on a board, a semiconductor element portion of the active matrix substrate, in which the plurality of semiconductor elements are formed, comprising:

- a storage capacitor formed on the board;

- a first insulating layer formed on the storage capacitor;

- a semiconductor layer formed above the storage capacitor via the first insulating layer:

- a gate insulating layer formed on the semiconductor layer;

- a gate electrode layer including a gate electrode

formed above the semiconductor layer via the gate insulating layer;

a second insulating layer covering the gate electrode layer and the semiconductor layer;

a first light-shielding layer formed above the semiconductor layer via the second insulating layer to cover at least a channel region of the semiconductor layer;

a third insulating layer formed on the first light-shielding layer;

a source electrode layer including a source electrode and a drain electrode formed on the third insulating layer;

a fourth insulating layer formed on the source electrode layer; and

a pixel electrode formed on the fourth insulating layer and electrically connected to the drain electrode,

wherein the first light-shielding layer is conductive and has a drain-side light-shielding portion electrically connected to one of a pair of electrodes of the storage capacitor and also electrically connected to the drain electrode.